



MultiView

500A / 500S

Receiver

Quick Reference
&
Setup Guide



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MAGENTA MULTIVIEW™ SERIES

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FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

This Magenta Research LTD product is Underwriters Laboratories I.T.E. listed when installed accordingly to this guide.



EUROPEAN UNION DECLARATION OF CONFORMITY

The manufacturer declares that this product meets the requirements of EU Directive 204/108/EC.



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1. Specifications

Cable Required: Category 5, 5e, 6 shielded or unshielded twisted pair

Compliance: CE; FCC Class A, IC Class/class A, UL listed I.T.E Device

Video Support: RGBHV, RGB, Composite, S-Video, Component Video modes

**Maximum
Resolution and**

Refresh Rate: At 500 ft. (152 m) or less, 1366x768
At 250 ft (74m) or less, 1092x1080

Required Source

Impedance: Video OUT: 75 ohms;
Audio OUT (if any): 600 ohms maximum

Required Destination

Impedance: Video IN: 75 ohms;
Audio IN (if any): 600 ohms minimum

Audio

Characteristics: Channels: Right/Left summed;
Line Level 600 Ohm Unbalanced

Serial

Characteristics: Protocol: Asynchronous; transparent to data format;
transparent to data rates up to 19.2 kbps duplex;
data rates to 115 kbps simplex
3 wire Tx, Rx, Gnd

Connectors: (1) 3.5-mm, (1) RJ-45, (1) HD15 F

Temperature

Tolerance: Operating: 32 to 104°F (0 to 40°C);
Storage: -4 to +140°F (-20 to +60°C)

Humidity

Tolerance: Up to 80% noncondensing

Enclosure: Steel

Power: +5 V  @ 260 mA max
Consumption: 1.3 watts maximum

Size: 0.88 "H x 3.12"W x 3.75"D (2.2 x 7.9 x 9.5 cm)

Weight: 0.56 lb. (0.26 kg)

2. Introduction

2.1 Overview

Magenta's MultiView™ CAT5 Video System MultiView series extends VGA and audio signals over ordinary Category 5 cable.

This manual covers the Magenta MultiView™ 500A CAT5 Video System Series Receiver with audio and the MultiView 500S receiver with RS232 serial support.

For information on the respective transmitter unit, please refer to the appropriate manual included with the transmitter.

WARNING



This equipment is not intended for, nor does it support, distribution through an Ethernet network. Do not connect these devices to any sort of networking or telecommunications equipment!
Use only Magenta Research LTD approved MultiView power adapters. Failure to do so, may damage this device and will void warranty.

2.2 Equipment You May Also Need

- 1/8" (3.5mm) Audio cable with RCA jacks.
- 1/8" (3.5mm) serial cable with DB9 connector.
- Video cable with HD15 connectors
- CAT5 cable

2.3 Compatible Cabling

Magenta Research products are compatible with Cat5/5e/6 data cabling as well as skew free CAT5/5e cabling manufactured for video applications. Note that some skew free Cat5 is specific to a particular vendor and is not compatible with our products. Please ensure any skew free CAT5 cable is non-proprietary prior to purchase/installation.

CAT6 cable, due to the manufacture method, can exhibit much greater skew than standard CAT5/5e and may require skew compensation beyond what the standard product offers. Please contact Magenta Research for assistance.

CAT5/5e/6 cabling for the Magenta MultiView™ Series must be pinned to the TIA-EIA T568B wiring specification (see appendix A) We also highly recommend that all CAT5 cables be pre-terminated and tested. Cables terminated on-site or in an existing infrastructure should be tested before use to ensure compliance with the TIA-EIA T568B specification. Using incorrectly terminated CAT5 cables can damage the Magenta MultiView™ Series.

The Cat5/5e/6 cable should be suitably rated Listed cable (DUZX) communication cables, TYPE CMP, CMR, CMG or CM as designated in the NEC. Cables are to be installed in accordance with the NEC and local building and electrical codes. This is the responsibility of the end user/installer of this product.

3. Setup and Installation

3.1 Cabling Considerations

- We recommend mounting and connecting all cabling to the MultiView™ Series components before applying power.
- Make sure that the CAT5 cable you intend to use has been tested to comply with the T568B wiring specification (See **Appendix A**).

3.2 Making the Connections

3.2.1 CONNECTIONS AND SETUP IN GENERAL

First ensure all units have been configured for correct operation and signal types. See appropriate configuration sections of this manual and the respective transmitter manual.

This section contains figures showing connections with the specific MultiView™ Series models. In general, however, the connection and setup procedure at both transmitter and receiver ends is as follows:

At the transmitter end (refer to the transmitter user guide) :

1. Connect the source video to the MultiView™ Series transmitter video input port, which is an HD15 connector labeled SOURCE IN.
2. If desired, attach a local monitor via the local monitor port to LOCAL OUT.
3. Make your audio/serial connections via the 1/8" (3.5mm) audio connector, phoenix , or DB9 serial connector (transmitter model dependent).
4. Connect the CAT5 cable to the transmitter.
5. Apply power on the transmitter. The LED should light and, if there's a local monitor attached, a video image should appear on the monitor's screen.

At the receiver end:

1. Connect the VIDEO OUTPUT HD15 connector to the display unit and attach any audio cabling.
2. Connect a 1/8" (3.5mm) audio or serial cable to the AUDIO or SERIAL OUTPUT connection (model dependent).
3. Connect the CAT5 cable to the UTP INPUT connection.
4. Apply power. The LED should light and video should appear on the display (make sure display is powered ON).
5. To adjust video levels see **Section 3.4**.

3.2.2 CONNECTIONS ON THE VGA/AUDIO TRANSMITTER

The single-port units with audio support video and audio signals over CAT5 cable. The audio signal is line-level audio, and powered speakers are required. Figure 3-1 shows the MultiView™ Series UTx transmitter with Audio Transmitter connections, and Figure 3-2 shows the MultiView™ 500A receiver connections.

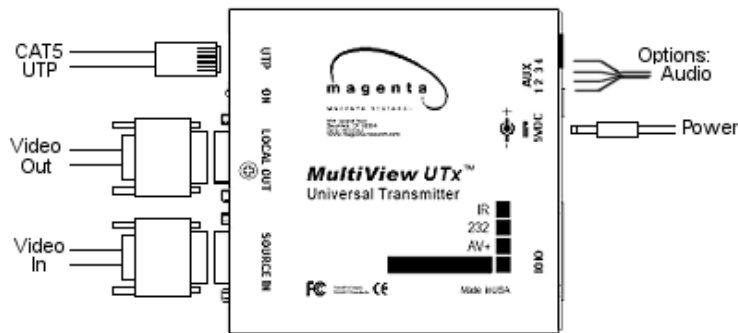


Figure 3-1. Connections on the UTx Universal Transmitter.

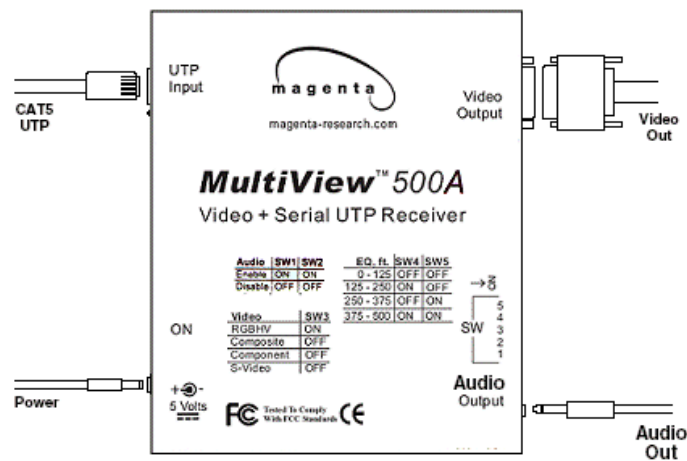


Figure 3-2. Connections on the MultiView 500A.

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3.2.3 CONNECTIONS ON THE VIDEO / SERIAL TRANSMITTER

The single-port units with audio support video and serial signals over CAT5 cable. The serial signal is 3 wire TX, RX, GND serial. Figure 3-3 shows the MultiView™ Series UTx transmitter with serial Transmitter connections, and Figure 3-4 shows the MultiView™ 500S serial receiver connections. See Appendix A for cable pinouts of the 500S.

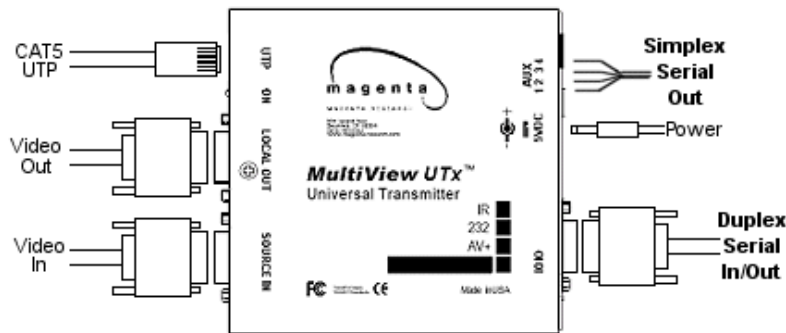


Figure 3-3. Connections on the UTx Universal Transmitter.

(NOTE: Both serial connection types are shown, but only one is used depending on model and settings).

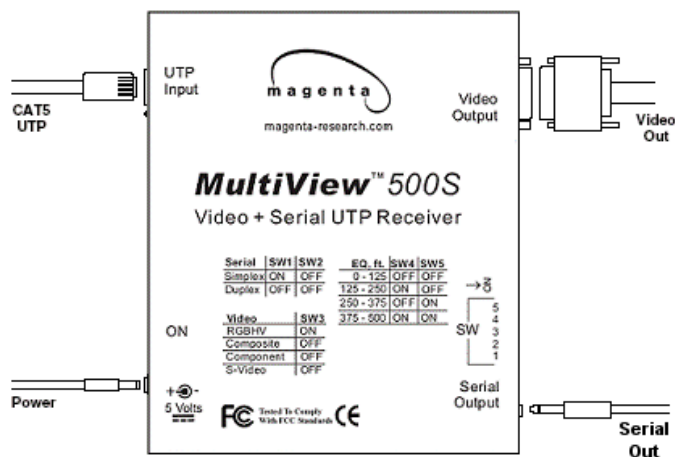


Figure 3-4. Connections on the MultiView 500S.

CHAPTER 3: Setup and Installation

3.3 Configuration Settings

The MultiView™ 500 receiver is configurable for various video, audio and serial modes depending upon model. Note that a compatible transmitter unit must be used at the source end. Reference the appropriate transmitter user guide or call for technical assistance. It is not possible to change an audio unit to a serial unit and vice versa.

A dipswitch on the receiver unit is used to set the video, audio, serial configuration mode. Table 3-1 below shows the configuration settings (ON = down, OFF = up):

NOTE:

There are no user serviceable parts inside the MultiView 500 receiver. All adjustments are performed externally.

SW Configuration Settings				
	SW position	1	2	3
Signal	Setting			
L/R Audio 500A models	On (100 Ω term.)	ON	ON	
	On (no term.)	OFF	ON	
	Off	OFF	OFF	
Serial 500S models	Duplex	OFF	OFF	
	Simplex	ON	OFF	
Video All Models	RGBHV			ON
	Composite			OFF
	S-Video			OFF
	Component			OFF

Table 3-1. MultiView 500 Receiver Configuration Settings.

3.4 Video Adjustment

The only adjustments required on the MultiView 500 receiver are the SW positions 4 and 5 which must be set to compensate for cable length. Using the table below as a guide, turn SW positions ON or OFF for best picture clarity (ON = down, OFF = up):

Cable distance EQ settings		
Cable Length	4	5
(0-125 Ft)	OFF	OFF
(125-250 Ft)	ON	OFF
(250-375 Ft)	OFF	ON
(375-500 Ft)	ON	ON

Table 3-2. Cable Length EQ Settings.

4. Troubleshooting

4.1. Common Problems

In most cases, nearly every issue with the MultiView™ CAT5 Video System can be resolved by checking the CAT5 termination and making sure that it's pinned to the TIA/EIA 568B wiring specification. However, there may be other problems that cause the system to not perform as it's designed. Below are solutions to the most common installation errors.

Problem:	No video signal at the transmitter local port or at the receiver.
Solution:	• Check that both units are powered. • Ensure EQ adjustment switches are is set correctly • Make sure the CAT5 cable is terminated correctly per the TIA/EIA 568B wiring specification. • Is the display device powered on and functioning? • Check to ensure display settings (resolution, refresh rate, etc) are compatible with input signal.
Problem:	Poor video quality:
Solution:	• Have all receiver adjustments been finished (see section 3.3). • Ensure EQ adjustment switches are is set correctly • Check all cable connections. • The video signal's refresh rate may be set too high. Reset to a lower refresh rate in your monitor-configuration menu.
Problem:	Poor audio quality (MV 500A only):
Solution:	• Powered speakers are required. Make sure speaker power is ON. • Check input source levels from the source device. Make sure the audio source is not overdriven or underdriven. • Audio is summed left and right for "A" versions. If using a single channel, both audio inputs must be connected at the transmitter end for full audio gain. Audio is line level. • Low Level Audio may require the 100 Ω termination disabled. Turn SW1 off to disable termination.
Problem:	Serial communication doesn't work correctly (MV500S only):
Solution:	• Are the serial devices connected properly? Are the serial parameters correct for source/destination devices? • Are the serial cables terminated correctly? If a null-modem cable is used, it must be placed at the receiver end. • When using RS-232 transmitters or receivers in daisy chains, Cat5 switches, Cat5 distribution amps, or Multi-output transmitters, the serial signal is a unidirectionally broadcast mode only. In this mode, all other MultiView™ CAT5 Video System devices must be the simplex serial type. • MV500S use 3 wire (TX,RX,GND) signals only via the 1/8" connector (see Appendix A for pinout).
Problem:	"Green shift" or "green washout" on multimedia signals.
Solution:	The standard video model is designed to function with DC coupled signals in which the black level is referenced to 0 volts. For five-component (RGB/H&V) AC coupled video, the MultiView™ Series UTx or XRTx Universal transmitter has been designed with full DC restoration capability. Please refer to the transmitter user manual.

Appendix A. Cabling Pinouts

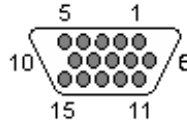


Table A-1. HD15 video connector.

Pin	RGBHV (VGA)	RGBS	RGsB	Com- posite	SVHS (Y/C)	YUV
1	Red +	Red +	Red +		C+	V+
2	Green+	Green+	Green+	C+	Y+	Y+
3	Blue+	Blue+	Blue+			U+
4	—	—	—			
5	Gnd	Gnd	Gnd			
6	Red-	Red-	Red-		C-	V-
7	Green-	Green-	Green-	C-	Y-	Y-
8	Blue-	Blue-	Blue-			U-
9	—	—	—			
10	Gnd	Gnd	—			
11	Gnd	Gnd	—			
12	—	—	—			
13	H Sync	C Sync	—			
14	V Sync	—	—			
15	Gnd	Gnd	—			

Appendix A. Cabling Pinouts

Table A-2. T568B CAT5 pinout

T568B CAT5 Specification

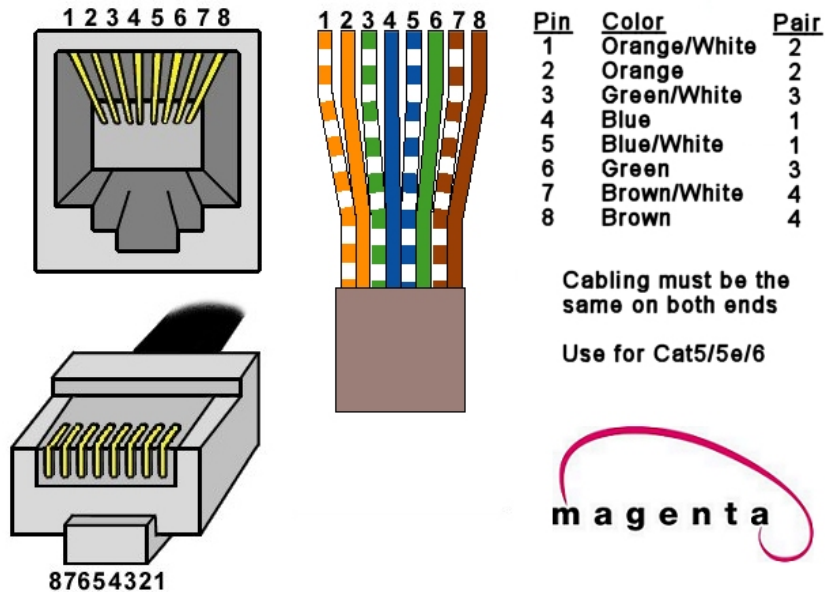
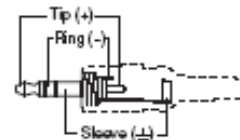


Table A-3. 1/8" (3.5 mm) Audio/Serial Connection (model dependent)

Pin	Signal	
Tip	Serial Tx (DB9 pin3)	Left Audio+
Ring	Serial Rx (DB9 pin2)	Right Audio+
Sleeve	Serial GND (DB9 pin5)	GND



Note: The stereo audio input at the transmitter is summed and output as mono audio on both channels at the receiver.

Appendix B. Mounting Options

The Rackmount Kits include brackets for mounting a single transmitter, single receiver, or a single dual daisychainable receiver. Figure B-1 shows the 1-Unit Rackmount Bracket, which can be used to mount a single unit on a wall or in a 19" rackmount bracket. Figure B-2 shows the 4-Unit Rackmount Bracket, which holds four units in a 19" x 1U rack.

The rigid mount bracket for the MultiView 500 series is incorporated into the top cover. Simply replace the top cover of the unit to install the mount bracket option.

Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature as specified in the Specification section of this manual.

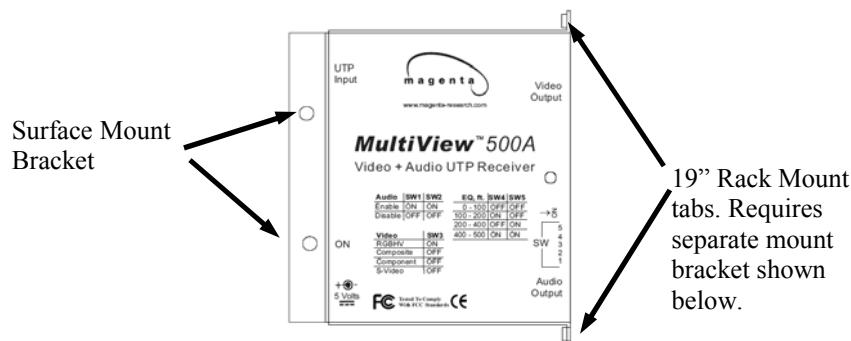


Figure B-1. Receiver Mounting Bracket.

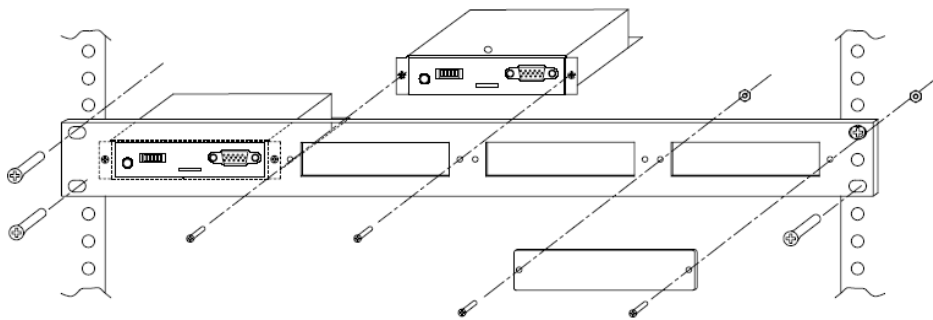


Figure B-2. 19" Rack Mounting kit.

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